

Remarks:

Claims 1-3, 5-7, 9-20, 22-28, and 30-34 are now pending in this application. Applicants have amended claims 1, 2, 5-7, 9, 12, 15, 16, 18, 22, 23, 25, 27, and 28 and added claim 34 to clarify the present invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner rejected claims 1-3, 5-7, 9-20, 22-28, and 30-33 under 35 U.S.C. § 112, second paragraph, as indefinite. Applicants have amended the claims to recited patentable subject matter with improved clarity. Applicants submit that the claims comply with 35 U.S.C. § 112, second paragraph, and respectfully request withdrawal of this rejection.

The Examiner rejected claims 1-3, 5-7, 9-20, 22-28, 30 and 33 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 6,535,793 to Allard in view of U.S. patent publication 2002/0010734 to Ebersole et al. The Examiner rejected claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Allard in view of U.S. patent 5,815,411 to Ellenby. The Examiner rejected claim 33 under 35 U.S.C. § 103(a) as being unpatentable over Allard in view of Ebersole and further in view of U.S. patent 5,079,491 to Nose et al.

The combination of Allard and Ebersole et al. does not suggest the claimed invention since, among other things, the combination does not suggest a system for remote programming of an industrial robot that includes a camera for capturing an image, the camera being movably located on the robot at a local site, a remote display device carried by or arranged on an operator

located at a remote site, physically separated from the local site, and a tracking unit associated with the remote display device and configured to determine a remote position and an orientation of the remote display device in the remote site in relation to a fixed remote coordinate system. Rather, Allard suggests system for remote control of a mobile robot that includes a mobile robot and a desktop computer for controlling the mobile robot.

On the other hand, Ebersole et al. only suggests an instructor located at the remote station. The instructor does not employ a tracking unit associated with a remote display device carried by or arranged on an operator located at a site remote to a robot and configured to specify a position and an orientation in the remote site in relation to a fixed remote coordinate system. Ebersole et al. suggests a head mounted camera at a local site, as shown in Fig. 4. The remote instructor is not specifying an orientation and position of the camera or anything else, such as a robot.

Particularly neither Allard nor Ebersole et al. suggests a tracking unit as described above, neither Allard nor Ebersole et al. suggests a first registering unit adapted to register the generated graphics to the augmented reality image in dependence on a remote position and orientation specified by a tracking unit, and a display adapted to display the generated graphics to the augmented reality image in dependence on the remote position and orientation specified by the tracking unit. These aspects of the claimed invention are shown in Fig. 1 and described in the related description. As the first specifying unit is moved, the movement is registered and displayed on the display in the augmented reality image. It follows that neither Allard nor Ebersole et al. suggests a specifying unit configured to specify a local position and an orientation

of the robot at the local site in relation to a local coordinate system, wherein the local position and orientation of the robot is dependent on the remote position and orientation specified by the tracking unit in the remote coordinate system.

In view of the above, the combination of Allard and Ebersole et al. does not suggest the invention recited in claims 1-3, 5-7, 9-20, 22-28, 30 and 33. Therefore, the combination of Allard and Ebersole et al. does not make the invention recited in claims 1-3, 5-7, 9-20, 22-28, 30 and 33 obvious. Accordingly, Applicants respectfully request withdrawal of this rejection.

The combination of Allard and Ellenby does not suggest the invention recited in claims 31 and 32 since, among other things, Ellenby does not overcome the above-discussed deficiencies of Allard. Along these lines, Ellenby does not suggest a system for remote programming of an industrial robot that includes a camera for capturing an image, the camera being movably located on the robot at a local site, a remote display device carried by or arranged on an operator located at a remote site, physically separated from the local site, and a tracking unit associated with the remote display device and configured to determine a remote position and an orientation of the remote display device in the remote site in relation to a fixed remote coordinate system. Ellenby et al. only suggests a vision system that displays a view of an area and data stored in a database. Therefore, the combination of Allard and Ellenby does not suggest the present invention as recited in claims 31 and 32.

In view of the above, the combination of Allard and Ellenby does not suggest the invention recited in claims 31 and 32. Therefore, the combination of Allard and Ellenby does

not make the invention recited in claims 31 and 32 obvious. Accordingly, Applicants respectfully request withdrawal of this rejection.

The combination of Allard, Ebersole et al. and Nose et al. does not suggest the invention recited in claim 33 since, among other things, the combination does not suggest a system for remote programming of an industrial robot that includes a camera for capturing an image, the camera being movably located on the robot at a local site, a remote display device carried by or arranged on an operator located at a remote site, physically separated from the local site, and a tracking unit associated with the remote display device and configured to determine a remote position and an orientation of the remote display device in the remote site in relation to a fixed remote coordinate system. The shortcomings of Allard and Ebersole et al. are described above. Nose et al. only suggests a robot control system. Nose et al. does not suggest any of the aspects of the claimed invention that relate to remote imaging and control of a robot by a remote operator and system.

In view of the above, the combination of Allard, Ebersole et al. and Nose et al. does not suggest the invention recited in claim 33. Therefore, the combination of Allard, Ebersole et al. and Nose et al. does not make the invention recited in claim 33 obvious. Accordingly, Applicants respectfully request withdrawal of this rejection.

In view of the above, the references relied upon in the office action do not suggest patentable features of the claimed invention. Therefore, the references relied upon in the office action do not make the claimed invention obvious. Accordingly, Applicants respectfully request

withdrawal of the rejections based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and issuance of the Notice of Allowance.

If an interview would advance the prosecution of this application, Applicants respectfully urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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